WASHINGTON DEPARTMENT OF ECOLOGY

ENVIRONMENTAL ASSESSMENT PROGRAM

FRESHWATER MONITORING UNIT

STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 35P050

STATION NAME: George Creek at Mouth

WATER YEAR: 2011

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Introduction

Watershed Description

George Creek is located in Asotin County in Southeast Washington. It flows northeast out of the Blue Mountains, beginning at an elevation of 5470 feet. The upper portion of the watershed is primarily forested land. The lower to middle areas are used by ranchers primarily as rangeland.

Gage Location

The George Creek at Mouth station is located on private property off of Cloverland Road, 0.1 miles upstream from the confluence with Asotin Creek.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	128 (USGS)
Latitude (degrees, minutes, seconds)	46° 18' 0" N
Longitude (degrees, minutes, seconds)	117° 6' 0" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	23
Median Annual Discharge (cfs)	4.3
Maximum Daily Mean Discharge (cfs)	111
Minimum Daily Mean Discharge (cfs)	1.5
Maximum Instantaneous Discharge (cfs)	124
Minimum Instantaneous Discharge (cfs)	1.5
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	65
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	1.6
Number of Days Discharge is Greater Than Range of Ratings	7
Number of Days Discharge is Less Than Range of Ratings	0
Number of Un-Reported Days	141
Number of Days Qualified as Estimates	137
Number of Modeled Days	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Table 2 Discussion (Discharge Statistics)

The pressure transducer was removed for the winter in the middle of November and re-installed in late March. This accounts for the majority of unreported days.

Nine discharge measurements were taken throughout the water year, ranging from1.4 to 61 cfs.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	71.6
Potential Weighted Rating Error (% of discharge)	13.6
Total Potential Error (% of discharge)	85.2

Table 3 Discussion (Error Analysis)

The high potential logger drift error is due to the mean daily flow difference between corrected and uncorrected data being greater than 20%.

Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	4.21
Maximum Recorded Stage (feet)	6.39
Range of Recorded Stage (feet)	2.18

Table 4 Discussion (Stage Record)

Table 5. Rating Table Summary

Rating Table No.	601	8	401
Period of Ratings	10/1/10 to 10/5/10	10/1/10 to 11/16/10	10/5/10 to 1/4/11
Range of Ratings (cfs)	0 to 145	0 to 145	0 to 121
No. of Defining Measurements	9	6	8
Rating Error (%)	13.6	10.6	13.5

Rating Table No.	801	501	9
Period of Ratings	11/16/10 to 1/17/11	1/17/11 to 4/8/11	4/2/11 to 5/16/11
Range of Ratings (cfs)	0 to 145	0 to 120	0 to 95
No. of Defining Measurements	6	6	2
Rating Error (%)	10.6	16.7	12.6

Rating Table No.	802	502	
Period of Ratings	5/15/11 to 7/26/11	6/14/11 to 9/30/11	
Range of Ratings (cfs)	0 to 145	0 to 120	
No. of Defining Measurements	6	6	
Rating Error (%)	10.6	16.7	

Table 5 Discussion (Rating Tables)

Ratings 401, 501, and 8 were a result of varying degrees of leaf litter build-up on the control. Ratings 802 and 9 were due to seasonal runoff.

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	n/a
Range of Modeled Stage (feet)	n/a
Range of Modeled Discharge (cfs)	n/a
Valid Period for Model	n/a
Model Confidence	n/a

Table 6 Discussion (Modeled Data)

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

Table 7 Discussion (Surveys)

Activities Completed

Removed pressure transducer for the winter.

Appendix